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Date of signature and deposit -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:)
BRADY REUBEN DAVIES) Confirmation No. TBA
Serial No. 10/590954) Group Art Unit: TBA
Filed: August 28, 2006) Examiner TBA
For: Selective Bonding for Forming a Microvalve) Attorney Docket 1-24871)

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

INFORMATION DISCLOSURE STATEMENT

Honorable Sir:

Pursuant to 37 C.F.R. 1.97(b), record is hereby made of information that the Patent Office may wish to consider in connection with its examination of the above-identified application. A completed PTO/SB/O8 form is enclosed along with copies of any such information with the exception of U.S. patent documents. As of the date of mailing of this paper a first office action on the merits has not been mailed the above-identified application.

Respectfully submitted,

James D. Schweikert Reg. No. 58,057

MacMillan, Sobanski & Todd, LLC One Maritime Plaza, Fifth Floor 720 Water Street Toledo, Ohio 43604 (419) 255-5900

PTO/SB/08a (07-05)

(SUBSTITUTE FOR FORM 1449A/PTO)

U.S. DEPARTMENT OF COMMERCE
PATENT AND THE PATEN

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

SHEET 1 OF 5 ATTORNEY DOCKET NUMBER 1-24871

APPLICATION NUMBER	10/590954
FILING DATE	August 28, 2006
FIRST NAMED INVENTOR	BRADY REUBEN DAVIES
ART UNIT	TBA
EXAMINER NAME	TBA
1 D N	1 24971

U.S.	PA	FENT	DOCU	IMENTS
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EXAMINER	СпЕ	DOCMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR	PAGES, COLUMNS, LINES WHERE RELEVANT
INITIAL	No. '	NUMBER-KIND CODE 2 (IF KNOWN)	MM-DD-YYYY	APPLICATE OF CITED DOCUMBNET	PASSAGES OR RELEVANT FIGURES APPEAR
		0,886,045	04-28-1908	EHRLICH ET AL.	
	<u> </u>	1,886,205	11-01-1932	LYFORD	
	ļ	1,926,031	09-12-1933	BOYNTON	
	-	2,412,205	12-10-1946	Соок	
	 	2,504,055	04-11-1950	THOMAS	
	<u> </u>	2,840,107	06-24-1958	CAMPBELL	
		2,875,779	03-03-1959	CAMPBELL	
-		3,031,747	05-01-1962	GREEN	
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		4,290,023	07-27-1982	LAUTERBACH ET AL.	
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		4,943,032	07-24-1990	ZDEBLICK	
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		4,966,646	10-30-1990	ZDEBLICK	
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		5,050,838	09-24-1991		
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EXAMINER

DATE CONSIDERED

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PTO/SB/08a (07-05)

		110/55/600 (6/ 65)
(SUBSTITUTE FOR FORM 1449A/PTO)	APPLICATION NUMBER	10/590954
U.S. DEPARTMENT OF COMMERCE	FILING DATE	August 28, 2006
PATENT AND TRADEMARK OFFICE	FIRST NAMED INVENTOR	BRADY REUBEN DAVIES
INFORMATION DISCLOSURE	ART UNIT	TBA
STATEMENT BY APPLICANT	Examiner Name	TBA
SHEET 2 OF 5	ATTORNEY DOCKET NUMBER	1-24871

U.S. PATENT DOCUMENTS

EXAMINER	CITE	DOCMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR	PAGES, COLUMNS, LINES WHERE RELEVANT
INITIAL	No.1	NUMBER-KIND CODE 2 (IF KNOWN)	MM-DD-YYYY	APPLICATE OF CITED DOCUMBNET	PASSAGES OR RELEVANT FIGURES APPEAR
		5,058,856	10-22-1991	GORDON ET AL.	
		5,061,914	10-29-1991	BUSCH ET AL.	
		5,064,165	11-12-1991	JERMAN	
		5,065,978	11-19-1991	ALBARDA ET AL.	
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		5,069,419	12-03-1991	JERMAN	
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		5,082,242	01-21-1992	BONNE ET AL.	
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EXAMINER DATE CONSIDERED

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PTO/SB/08a (07-05)

	1 10/02/004 (07 05)
APPLICATION NUMBER	10/590954
FILING DATE	August 28, 2006
FIRST NAMED INVENTOR	BRADY REUBEN DAVIES
ART UNIT	TBA
EXAMINER NAME	TBA
ATTORNEY DOCKET NUMBER	1-24871
	FILING DATE FIRST NAMED INVENTOR ART UNIT EXAMINER NAME

U.S. PATENT DOCUMENTS

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EXAMINER	Спте	DOCMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR	PAGES, COLUMNS, LINES WHERE RELEVAN
INITIAL	No. 1	NUMBER-KIND CODE 2 (IF KNOWN)	MM-DD-YYYY	APPLICATE OF CITED DOCUMBNET	PASSAGES OR RELEVANT FIGURES APPEAR
		5,400,824	03-28-1995	GSCHWENDTNER ET AL.	
		5,417,235	05-23-1995	WISE ET AL.	
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		5,553,790	09-10-1996	FINDLER ET AL.	
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		5,611,214	03-18-1997	WEGENG ET AL.	
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_		5,848,605	12-15-1998	BAILEY ET AL.	
,		5,873,385	02-23-1999	BLOOM ET AL.	
		5,909,078	06-01-1999	WOOD ET AL.	
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EXAMINER

DATE CONSIDERED

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					PTO/SB/08a (07-05)	
(Substitu	TE FOR F	ORM 1449A/PTO)		APPLICATION NUMBER	10/590	954
U.S. DEPARTMENT OF COMMERCE			FILING DATE	August 28, 2006		
PATENT AND TRADEMARK OFFICE			FIRST NAMED INVENTOR		Y REUBEN DAVIES	
INFORMATION DISCLOSURE			ART UNIT	TBA		
STATEMENT BY APPLICANT			Examiner Name	TBA		
SHEET 4 OF 5			ATTORNEY DOCKET NUMBER	1-2487	1	
			U.S. PATI	ENT DOCUMENTS		
EXAMINER	Сіте	DOCMENT NUMBER	PUBLICATION DATE	Name of Patentee or	- "	PAGES, COLUMNS, LINES WHERE RELEVANT
INITIAL	No. ¹	NUMBER-KIND CODE 2 (IF KNOWN)	MM-DD-YYYY	APPLICATE OF CITED DOCUMBN	ET	PASSAGES OR RELEVANT FIGURES APPEAR
		2002/0174891	11-28-2002	MALUF ET AL.		
		2003/0092526	05-15-2003	HUNNICUTT ET AL.		
		2003/0098612	05-29-2003	MALUF ET AL.		
		2006/0218953	10-05-2006	HIROTA		
FOREIGN PA			ATENT DOCUMENT	S		
EXAMINER	Сіте	FOREIGN PATENT DOCUMENT	PUBLICATION DATE	NAME OF PATENTEE OR		PAGES, COLUMNS, LINES WHERE RELEVANT
INITIAL	No. ¹	COUNTRY CODE NUMBER KIND	MM-DD-YYYY	APPLICATE OF CITED DOCUMBN	ET	PASSAGES OR RELEVANT FIGURES APPEAR
		CODE				
		DE2215526	10-04-1973	LICENTIA GMBH		
		DE2930779	02-07-1980	TOKYO SHIBAURA ELEC CO	TRIC	
		DE3401404	07-25-1985	BOSCH GMBH ROBERT (DE)	
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		DE4417251	11-23-1995	BOSCH GMBH ROBERT	(DE)	
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				FRAUNHOFER GES		
	:	EP250948	01-07-1988	FORSCHUNG (DE)		
				UNIV LELAND STANFOR	D	
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		WO00/14415	03-16-2000	LUCAS NOVASENSOR (L al.	JS) et	
		WO99/16096	04-01-1999	MCNC et al.		
			-			
m				DATE GOVERNO		
EXAMINER				DATE CONSIDERED		

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(SUBSTITUTE FOR FORM 1449B/PTO)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

SHEET 5 OF 5

EXAMINER

	110.02.000 (0.00)
APPLICATION NUMBER	10/590954
FILING DATE	August 28, 2006
FIRST NAMED INVENTOR	BRADY REUBEN DAVIES
ART UNIT	TBA
Examiner Name	TBA
ATTORNEY DOCKET NUMBER	1-24871

SHEET J OF J		ATTORNET DOCKET NOMBER 1 -2-4071
		NON PATENT LITERATURE DOCUMENTS
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
		"A Silicon Microvalve For The Proportional Control Of Fluids" by K.R. Williams, N.I. Maluf, E.N. Fuller, R.J. Barron, D.P. Jaeggi, and B.P. van Drieënhuizen, TRANSDUCERS '99, Proc. 10th International Conference on Solid State Sensors and Actuators, held June 7-10, 1999, Sendai, JAPAN, pp. 18-21.
		"Process for in-plane and out-of-plane single-crystal-silicon thermal microactuators"; J. Mark Noworolski, et al.; Sensors and Actuators A 55 (1996); pp. 65-69.
		Ayón et al., "Etching Characteristics and Profile Control in a Time Multiplexed ICP Etcher," Proc. Of Solid State Sensor and Actuator Workshop Technical Digest, Hilton Head SC, (June 1998) 41-44.
		Bartha et al., "Low Temperature Etching of Si in High Density Plasma Using SF6/O2," Microelectronic Engineering, Elsevier Science B.V., vol. 27, (1995) 453-456.
		Fung et al., "Deep Etching of Silicon Using Plasma" Proc. Of the Workshop on Micromachining and Micropackaging of Transducers, (Nov. 7-8, 1984) pp. 159-164.
		IEEE Technical Digest entitled "Compliant Electro-thermal Microactuators", J. Jonsmann, O. Sigmund, S. Bouwstra, Twelfth IEEE International Conference on Micro Electro Mechanical Systems held January 17-21, 1999, Orlando, Florida, pp. 588 - 593, IEEE Catalog Number: 99CH36291C.
	,	Klaassen et al., "Silicon Fusion Bonding and Deep Reactive Ion Etching; A New Technology for Microstructures," Proc., Transducers 95 Stockholm Sweden, (1995) 556-559.
		Linder et al., "Deep Dry Etching Techniques as a New IC Compatible Tool for Silicon Micromachining," Proc,. Transducers, vol. 91, (Jun. 1991) pp. 524-527.
		Petersen et al. "Surfaced Micromachined Structures Fabricated with Silicon Fusion Bonding" Proc., Transducers 91, (Jun. 1992) pp. 397-399.
		Yunkin et al., "Highly Anisotropic Selective Reactive Ion Etching of Deep Trenches in Silicon," Microelectronic Enginineering, Elsevier Science B.V., vol. 23, (1994) pp. 373-376.

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DATE CONSIDERED

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.